

07/07/2014

2014-07-07

Updated HIV Testing Algorithm

On June 27, 2014 [National HIV Testing Day and New Testing Recommendations](#), was published in CDC's Morbidity and Mortality Weekly Report (MMWR). June 27th was National HIV Testing Day and a good time to heighten our awareness of the new CDC HIV testing guidelines.

The updated HIV diagnostic testing algorithm recommends that laboratories use a 4th generation HIV-1/HIV-2 antibody and HIV-1 p24 antigen combination immunoassay for initial HIV screening. This does not include the FDA-approved single use rapid HIV-1/HIV-2 antigen/antibody combination assay (the Determine assay distributed by Alere) as data is insufficient to recommend use in this algorithm at this time. If the screen is negative, no further testing is required. Positive results should then be confirmed with an FDA-approved antibody immunoassay that differentiates HIV-1 from HIV-2 antibodies. If the initially positive result is non-reactive or indeterminate using the HIV-1/HIV-2 antibody differentiation immunoassay, then the specimen should be retested with an FDA-approved HIV-1 nucleic acid test (NAT). If the HIV-1 NAT is positive at this stage, an acute HIV-1 infection is evident. A negative HIV-1 NAT result following a nonreactive or indeterminate HIV-1/HIV-2 antibody differentiation immunoassay result most likely indicates a false-positive result on the initial screening immunoassay.

When serum or plasma specimens are submitted for testing after a reactive (preliminary positive) result from any rapid HIV test, laboratories should use this same testing algorithm, beginning with an antigen/antibody combination immunoassay.

The updated recommendations allow for more accurate classification of HIV-2 infections, as well as the detection of acute HIV infections that would be missed by antibody tests alone. Early detection can expedite entry of patients into care because of reduced turnaround time for test results.

Refer to the [Recommended Laboratory HIV Testing Algorithm for Serum or Plasma Specimens](#) for more details and feel free to call the MTPHL with any questions regarding the new HIV testing algorithm.

FOCUS Programs Prove the Value of 4th Generation Laboratory-Based Testing

Also published in the June 27th MMWR is an [article](#) discussing two HIV screening programs in New York and New Orleans that could be used as models for use in other healthcare settings. These two Frontlines of Communities in the U.S. (FOCUS) facilities implemented routine HIV screening programs that included 1) supportive institutional policy changes to commit to routine HIV screening, 2) electronic health records (EHR) to prompt testing and automate orders, 3) staff education on best practices for HIV testing practices and outcomes, and 4) use of conventional laboratory testing for HIV.

The authors are referring to 4th generation HIV assays when they state that new laboratory testing methods can reduce turnaround time for test results, are more sensitive during early infection, and can detect acute HIV infections. The transition from point-of-care rapid testing to laboratory testing reduced staff time and costs, increased feasibility to test larger numbers of patients, and allowed healthcare facilities to detect acute HIV infections. Almost all patients who tested HIV-positive received their test results.

Approximately 16% of the estimated 1.1 million persons living with HIV in the U.S. are unaware of their infection, and therefore unable to benefit from effective treatment. By instituting routine screening in healthcare settings using these FOCUS models, HIV-infected persons can be identified and linked into medical care. This allows them to benefit from effective treatment, which improves their health and reduces HIV transmission.

4th Generation HIV at MTPHL

The Public Health Laboratory continues to use the most current HIV methodology, and has been performing HIV screening using the newly published algorithm since June of 2012. When the 4th generation combo assay is repeat reactive, MTPHL uses the Multispot HIV-1/HIV-2 differentiation assay for confirmation. If the Multispot is negative or indeterminate, the specimen is referred for HIV-1 NAT testing. This testing is performed at Wadsworth, the New York state public health laboratory, which provides excellent turnaround time. Since MTPHL started testing in June 2012, we have confirmed 2 clusters that included acute infections. During the acute infection phase, patients have high viral loads and are most infectious, so early detection is a good tool in decreasing the spread of HIV.

There are currently three FDA approved 4th generation assays, two traditional lab-based assays, and one moderately complex rapid test. All of these tests will detect HIV earlier than waived rapid tests on the market.

Remember that, by state rule, when performing HIV screening, a positive HIV test must have a serum specimen submitted to the MTPHL for confirmatory testing.

More information on the Suggested Reporting Language for the HIV Laboratory Diagnostic Testing Algorithm can be found in APLH's [document](#). Additionally, the archive of the APLH webinar "Reporting Language for the HIV Diagnostic Testing Algorithm" is available until 11/8/14. The webinar fee is \$115 per site or \$25 for an individual. Registration is available [here](#).

Updates from the MT
Laboratory Services
Bureau
800-821-7284
www.lab.hhs.mt.gov



Montana Communicable Disease Weekly Update

Release date: 7/3/2014



DISEASE INFORMATION

Summary – MMWR Week 26 - Ending 6/28/2014 Preliminary disease reports received at DPHHS for the reporting period June 22–28, 2014 included the following:

- **Vaccine Preventable Diseases:** Pertussis (9), Varicella (3)
- **Invasive Diseases:** Hantavirus Pulmonary Syndrome (1)
- **Enteric Diseases:** Campylobacteriosis (4), Cryptosporidiosis (3), Cyclosporiasis (1), Giardiasis (1), Salmonellosis (2)
- **STD/HIV:** Chlamydia (60) , Gonorrhea (6), Syphilis (2), HIV** (1)
- **Hepatitis:** (0)
- **Vector-borne Diseases:** (0)
- **Animal Rabies:** (0)
- **Travel Related Conditions:** Lyme Disease (1)

* Weekly updated Montana Influenza Summary is included as link in the Influenza section of this update.

** A case is included if a new confirmatory test or report was received by DPHHS. Cases include both persons who were newly diagnosed and persons newly reported in Montana who may have been diagnosed in another state or country.

NOTE: The attached reports have multiple pages reflecting the following information: (1) cases for the past reporting week; (2) communicable diseases YTD; (3) clusters and outbreaks; and (4) a quarterly HIV/STD summary.

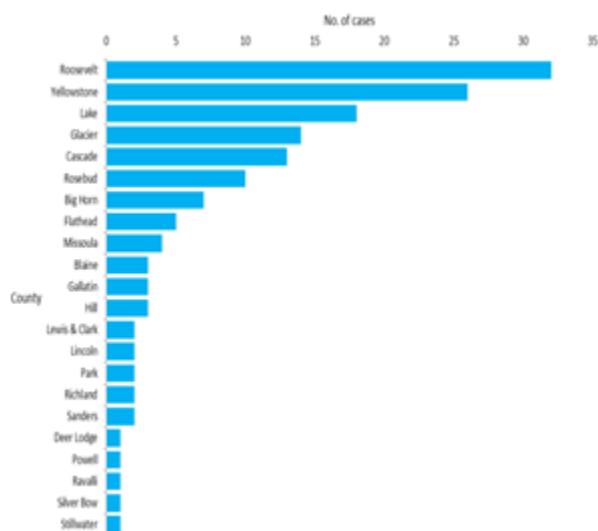
HOT TOPICS

Measles activity in the United States: Measles is relatively rare in highly vaccinated populations. However, sporadic cases can occur as visitors from other countries or US citizens traveling abroad can become infected before or during travel and spread the infection to unvaccinated or unprotected persons. Recent reports from the CDC state that there has been increased measles activity in the United States with 539 cases, including 17 outbreaks, reported to date in 2014. Montana has not had any reported measles cases since 1990; however, there have been several Montana residents who have been exposed to the disease in recent months. These events mean that we should increase public health surveillance for the disease, including maintaining your weekly conversations with your key surveillance partners.

The CDC has [an excellent informational website on measles](#), including a section that describes what the disease looks like, information for providers, and advice for international travelers. CDEpi is compiling guidance that we will distribute and upload to SharePoint in the coming weeks so that should the disease arrive in Montana, we can be prepared.

Montana Gonorrhea Update: Through June 28 in MMWR Year 2014, **153** gonorrhea cases have been reported, more than half the 224 cases reported in 2013. Nearly 80% of the cases in 2014 are from seven counties (Figure). County cases include cases reported on American Indian reservations that lie within the county's borders. The table shows the monthly trend of cases reported in each county. Nine cases were the most reported in any single month. Some counties have reported sporadic cases, but more concerning are counties that are reporting a high number of cases each month and counties reporting an increase in successive months.

**Figure: Gonorrhea cases by county —
Montana, Dec 29, 2013–June 28, 2014**



**Table: Counties reporting gonorrhea cases by month* —
Montana, Dec 29, 2013–June 28, 2014**

County	J	F	M	A	M	J
Roosevelt	■	■	■	■	■	■
Yellowstone	■	■	■	■	■	■
Lake	■	■	■	■	■	■
Glacier	■	■	■	■	■	■
Cascade	■	■	■	■	■	■
Rosebud	■	■	■	■	■	■
Big Horn	■	■	■	■	■	■
Flathead	■	■	■	■	■	■
Missoula	■	■	■	■	■	■
Blaine	■	■	■	■	■	■
Gallatin	■	■	■	■	■	■
Hill	■	■	■	■	■	■
Lewis & Clark	■	■	■	■	■	■
Lincoln	■	■	■	■	■	■
Park	■	■	■	■	■	■
Richland	■	■	■	■	■	■
Sanders	■	■	■	■	■	■
Deer Lodge	■	■	■	■	■	■
Powell	■	■	■	■	■	■
Ravalli	■	■	■	■	■	■
Silver Bow	■	■	■	■	■	■
Stillwater	■	■	■	■	■	■

* January cases include cases reported in December but are counted in MMWR year 2014.

FDA and CDC Investigation of Multistate Outbreak of *E. coli* 0121 Infections linked to Clover Sprouts: “The FDA and [CDC](http://www.cdc.gov) are warning consumers not to eat raw clover sprouts produced by Evergreen Fresh Sprouts LLC of Moyie Springs, Idaho. Sprouts grown by this firm were linked to a multi-state outbreak of Escherichia coli (*E. coli*) O121 in May. The firm has reported further production and distribution of sprouts grown from the same seed lot that was associated with the outbreak. Sprouts from this seed lot may still be in the marketplace.” More information can be found at <http://www.fda.gov/Food/RecallsOutbreaksEmergencies/Outbreaks/ucm398536.htm>

Collaborative Petting Zoo Campaign: The July issue of *Montana One Health* coincides with the collaborative Petting Zoo campaign found at the following link: <http://www.dphhs.mt.gov/publichealth/onehealth/July2014.PDF>. Please see our prevention materials for the general public, fair operators and sanitarians here: www.dphhs.mt.gov/publichealth/pettingzoo. DPHHS and the Department of Livestock are collaborating in this campaign to prevent illnesses associated with animal exhibits. We already reached out to sanitarians, extension agents and fair operators for their help. Materials were sent to fairs all over Montana. Let’s have fun this year and stay healthy when handling animals!

2013-2014 Influenza Season: The final Montana Influenza Summary is online at <http://www.dphhs.mt.gov/influenza/documents/MTFluReporting13-14.pdf>

INFORMATION/ANNOUNCEMENTS

MIDIS case reconciliation: The second quarter of 2014 ended on June 30. This is a good time to review and complete any open cases in MIDIS, including creating a notification and closing the investigations. The next quarterly completeness/timeliness report will be sent via ePass by the end of the month. If you do not have an ePass account, please contact Stacey Anderson (sanderson2@mt.gov) for instructions.

West Nile Virus: No human cases of WNV have been reported to CDEpi in 2014; however, we typically start to see human cases in early August. CDEpi plans on releasing a preemptive press release early next week emphasizing WNV prevention. In addition, CDEpi will be partnering with the Montana Public Health Laboratory and Carroll College to continue mosquito surveillance and testing during the 2014 WNV season.

- If you would like educational pamphlets geared towards both kids and adults please contact Joel Merriman at 406-444-0274 or JMerriman@mt.gov.
 - *Stop Growing Mosquitos In Your Yard* – children
 - *Understanding Mosquitos and West Nile Virus* - adults
- Stress the 5 D's!
 - **DAWN &**
 - **DUSK** - When possible, avoid spending time outside at dawn and dusk.
 - **DRESS**- Wear shoes, socks, long pants, and a long-sleeved shirt when outdoors for long periods of time or when mosquitoes are most active. Clothing should be light colored and made of tightly woven materials to keep mosquitoes away from the skin.
 - **DRAIN** - Reduce the amount of standing water in or near your property by draining and/or removing it. Mosquitoes may lay eggs in areas with standing water.
 - **DEET** - For additional protection from mosquitoes, use an insect repellent containing DEET (N,N-diethyl-m-toluamide) or picaridin (KBR 3023). Other insect repellents such as oil of lemon eucalyptus and IR3535 are also registered by the EPA but may be less effective than products containing DEET. It is important to follow the product guidelines when using insect repellent.
- **Resources**
 - [MT DPHHS -http://www.dphhs.mt.gov/publichealth/cdepi/surveillance/westnilevirus.shtml](http://www.dphhs.mt.gov/publichealth/cdepi/surveillance/westnilevirus.shtml)
 - [CDC - http://www.cdc.gov/westnile/index.html](http://www.cdc.gov/westnile/index.html)
 - [EPA – Insect Repellents: Use and Effectiveness - http://cfpub.epa.gov/opprpref/insect/](http://cfpub.epa.gov/opprpref/insect/)

OTHER RESOURCES

Pertussis: <http://www.dphhs.mt.gov/publichealth/cdepi/index.shtml>

Hantavirus: <http://www.dphhs.mt.gov/publichealth/cdepi/index.shtml>

Ticks: <http://www.dphhs.mt.gov/publichealth/ticks/index.shtml>

Mold: <http://www.dphhs.mt.gov/publichealth/cdepi/mold.shtml>

Water safety: <http://www.dphhs.mt.gov/publichealth/rwii/>

24/7 AVAILABILITY

The Communicable Disease Epidemiology (CDEpi) Program is available 24 hours a day, 7 days a week, 365 days a year, to assist local health jurisdictions. Local providers should call, including after normal business hours, their local health jurisdiction. The CDEpi 24-hour line is available as a back-up to the local health jurisdiction's 24-hour line. If you need

CDEpi assistance, please call 406.444.0273. Phone calls to this number outside of normal business hours will be answered by the answering service. The answering service will immediately forward the message to CDEpi, and we will respond as quickly as possible.

Local health jurisdictions, please ensure that your local providers have your 24/7/365 contact information. And please inform CDEpi or the Public Health Emergency Preparedness Program of updates to your required 24/7 contact information.

This update is produced by the Montana Communicable Disease Epidemiology Program. Questions regarding its content should be directed to 406.444.0273 (24/7/365). For more information: <http://cdepi.hhs.mt.gov>